

AMENDMENTS TO THE CLAIMS

Following is the list of claims and their status:

1-25 (Cancelled)

26. (Currently Amended): A An inlet device for separating a mixture of gas with liquid and/or solids and configured for fluid communication with a gravity separation vessel, the inlet device comprising a processing vessel comprising:

an inlet for a supply of the mixture to be separated;

a first and second outlet opening configured for a discharge of respectively a first mixture part and a second mixture part into a space of ~~a further~~ the gravity separation vessel;

a flow body arranged substantially concentrically in the ~~processing vessel~~ inlet device and provided with one or more swirl elements for setting the supplied mixture into swirling movement;

a discharge channel for discharging the first mixture part to the first outlet opening, which discharge channel is arranged substantially through an interior of the flow body and extends from a downstream side of the flow body to the first outlet opening;

a first resistance element with a predetermined flow resistance arranged between the second outlet opening and the flow body; and/or

a second resistance element with a predetermined flow resistance, arranged in the discharge channel, downstream of which the first outlet opening is arranged.

27. (Previously Presented): The device as claimed in claim 26, wherein the first resistance element includes one or more counter-swirl elements for reducing the swirling movement of the first mixture part flowing thereamong.

28. (Previously Presented): The device as claimed in claim 26, wherein the second resistance element includes one or more counter-swirl elements for reducing the swirling movement of the second mixture part flowing thereamong.

29. (Previously Presented): The device as claimed in claim 26, wherein the second resistance element includes a central core, on a top side of which is mounted a conical component which becomes wider in a flow direction.

30. (Previously Presented): The device as claimed in claim 29, wherein flat plates are provided for limiting a rotation of the mixture part flowing thereamong.

31. (Currently Amended): The device as claimed in claim 26, wherein the inlet opening of the ~~processing vessel~~ inlet device is provided with means for feeding in the mixture for separating at an increased tangential speed.

32. (Previously Presented): The device as claimed in claim 26, including a perforated plate placed close to the second outlet opening and downstream thereof for ensuring a substantially uniform velocity profile on a downstream side thereof.

33. (Previously Presented): The device as claimed in claim 26, wherein a swirl element includes one or more swirling blades, wherein the swirling blades are formed for setting into swirling movement or at least increasing the swirling movement of the mixture or mixture part flowing thereamong.

34. (Previously Presented): The device as claimed in claim 26, wherein a counter-swirl element includes one or more swirling blades, wherein the swirling blades are formed for decreasing the swirling movement of the mixture or mixture part flowing thereamong.

35. (Currently Amended): The device as claimed in claim 34, wherein an angle between a longitudinal direction of the ~~processing vessel~~ inlet device and a swirling blade amount to between approximately 0 and 80 degrees.

36. (Previously Presented): The device as claimed in claim 34, wherein the swirling blades are curved.

37. (Currently Amended): The device as claimed in claim 26, wherein the ~~processing vessel~~ inlet device includes an inner jacket which includes a conically tapering part in a flow direction.

38. (Previously Presented): The device as claimed in claim 37, wherein the conically tapering part is positioned between the swirl element and the resistance element.

39. (Previously Presented): The device as claimed in claim 26, wherein the first mixture part is formed by a light fraction, while the second mixture part is formed by a heavy fraction.

40. (Previously Presented): The device as claimed in claim 39, wherein the light fraction includes one or more gases and the heavy fraction includes one or more liquids.

41. (Previously Presented): The device as claimed in claim 39, wherein the light fraction comprises natural gas and the heavy fraction comprises oil and water.

42. (Previously Presented): The device as claimed in claim 26, wherein the first mixture part includes approximately 1% by volume of water and/or solids and the second mixture part includes at least approximately 95% by volume of liquid and/or solids.

43. (Previously Presented): The device as claimed in claim 26, wherein components of the processing vessel are embodied such that they can be fed through a manhole into a gravity separation vessel.

44. (Previously Presented): The device as claimed in claim 43, wherein a greatest dimension of a component amounts to a maximum of approximately 150 cm.

45. (Previously Presented): A device for separating a mixture of gas with liquid and/or solids, comprising:

a gravity separation vessel which is provided with an inlet for a supply of the mixture;

a processing vessel including:

an inlet for a supply of the mixture to be separated;

a first and second outlet opening for a discharge of respectively a first mixture part and a second mixture part into a space of a further vessel;

a flow body arranged substantially concentrically in the processing vessel and provided with one or more swirl elements for setting the supplied mixture into swirling movement;

a discharge channel for discharging the first mixture part to the first outlet opening, which discharge channel is arranged substantially through an interior of the flow body and extends from a downstream side of the flow body to the first outlet opening;

a first resistance element with a predetermined flow resistance arranged between the second outlet opening and the flow body; and/or

a second resistance element with a predetermined flow resistance, arranged in the discharge channel, downstream of which the first outlet opening is arranged,

the processing vessel can be mounted in the gravity separation vessel with the inlet connected to the inlet of the gravity separation vessel, wherein the first and second outlet openings of the processing vessel are arranged for the discharge of the first mixture part and the second mixture part into a space of the gravity separation vessel for further separation of the second mixture part.

46. (Previously Presented): The device as claimed in claim 45, wherein the second outlet of the processing vessel is placed at least partially in the second mixture part situated in the space so as to keep an open connection between the processing vessel and said space inside the separation vessel.

47. (Currently Amended): A method for treating a mixture of gas with liquid and/or solids, comprising the step of sending the mixture into ~~applying~~ a processing vessel ~~device~~ for separating a mixture of gas with liquid and/or solids, ~~comprising a~~ the processing vessel comprising:

an inlet for a supply of the mixture to be separated;

a first and second outlet opening for a discharge of respectively a first mixture part and a second mixture part into a space of a further vessel;

a flow body arranged substantially concentrically in the processing vessel and provided with one or more swirl elements for setting the supplied mixture into swirling movement;

a discharge channel for discharging the first mixture part to the first outlet opening, which discharge channel is arranged substantially through an interior of the flow body and extends from a downstream side of the flow body to the first outlet opening;

a first resistance element with a predetermined flow resistance arranged between the second outlet opening and the flow body; and/or

a second resistance element with a predetermined flow resistance, arranged in the discharge channel, downstream of which the first outlet opening is arranged; and

an inlet for a supply of the mixture,

wherein the processing vessel can be mounted in a gravity separation vessel with the inlet connected to the inlet of the gravity separation vessel, and

wherein the first and second outlet openings of the processing vessel are arranged for the discharge of the first mixture part and the second mixture part into a space of the gravity separation vessel for further separation of the second mixture part.

48. (Currently Amended): A method for designing a device for separating a mixture into a light and heavy fraction, comprising the step of designing components of a ~~processing vessel~~ an inlet device such that the components can be fed through a manhole into a gravity separation vessel, wherein the ~~processing vessel~~ inlet device comprises an inlet for the mixture, a first outlet for the light fraction and a second outlet for the heavy fraction, ~~in~~

Application No. 10/009,105
Paper Dated August 7, 2003
In reply to USPTO correspondence dated 05/15/2003
Attorney Docket No. 702-012058

~~addition to~~ the first and second outlet in fluid communication with the gravity separation vessel and a rotation means for setting the mixture into rotation, wherein swirl elements arranged close to the inlet and/or counter-swirl elements arranged close to the first and second outlet are provided with swirling blades dimensioned such that through the desired degree of rotation a preselected pressure is available whereby the boundary surface between the heavy and light fraction extends on a preselected level within the ~~processing vessel~~ inlet device.

49. (Cancelled)